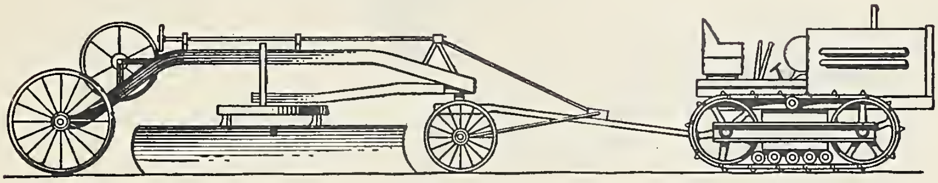
CONSTRUCTION



HINTS

UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE
WASHINGTON, D.C.

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AXE HANDLE EXTRACTOR

Submitted by William Vaughan, Junior Foreman C & M
Camp Axin F-25, Manistee

In the training of a great number of unskilled men in the CCC in the use of axes, many handles are broken. It was noticed that considerable difficulty was experienced in getting the broken handles out of the head. This led to the resurrection of a device commonly used in the lumber camps.

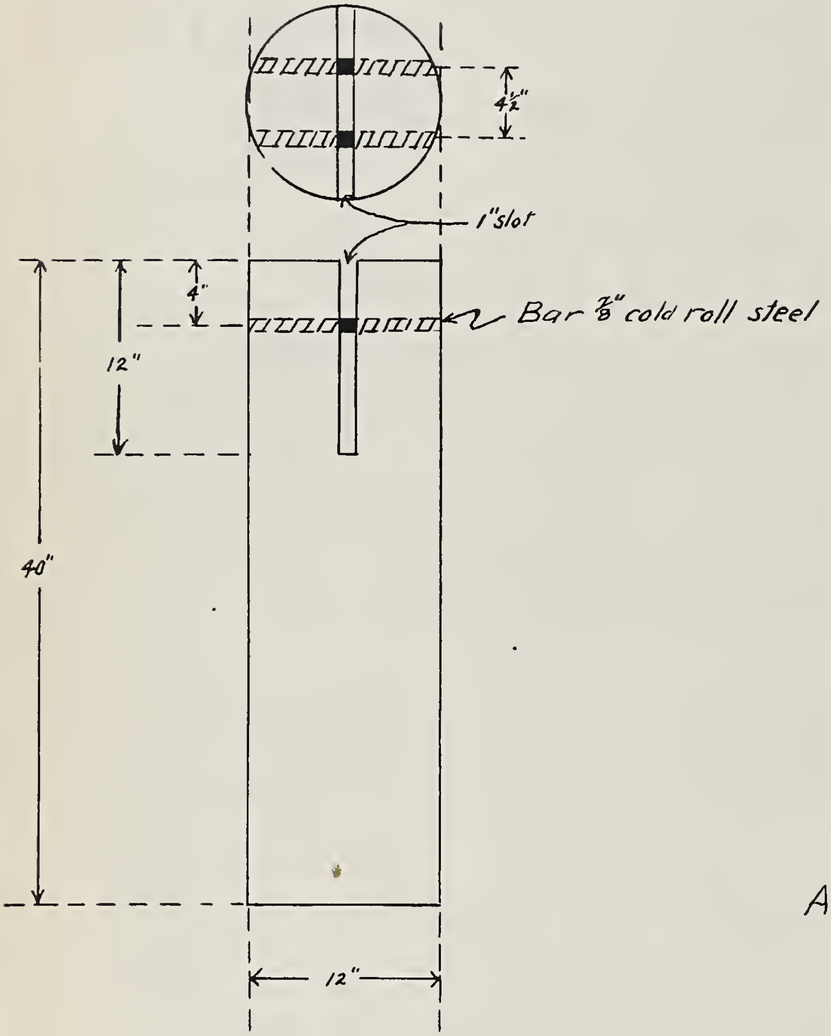
The outfit is simple and can be manufactured in any camp. Take a good hardwood bolt 3'4" long and about 12" in diameter. Saw the ends square so that it will stand on the floor. Across the upper end cut a groove 11" wide and 12" deep. About 4" below the top of the block bore two 7/8" holes about 4½" apart through the block and at right angles to the groove. Into each hole is fitted a piece of 7/8" cold rolled steel.

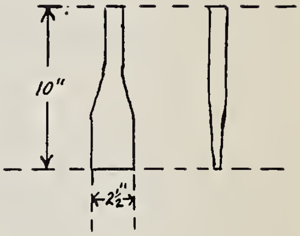
In the use of this apparatus the axe head, after having the broken handle sawed off close is placed in the groove with the stub of the handle between the two steel rods. An axe handle drift and a heavy hammer are used to force the broken handle out. The former is a piece of iron about 10" long with one end shaped so that it will just go through the eye of an axe and the other end rounded to form a handle.

(Over)

AXE HANDLE EXTRACTOR

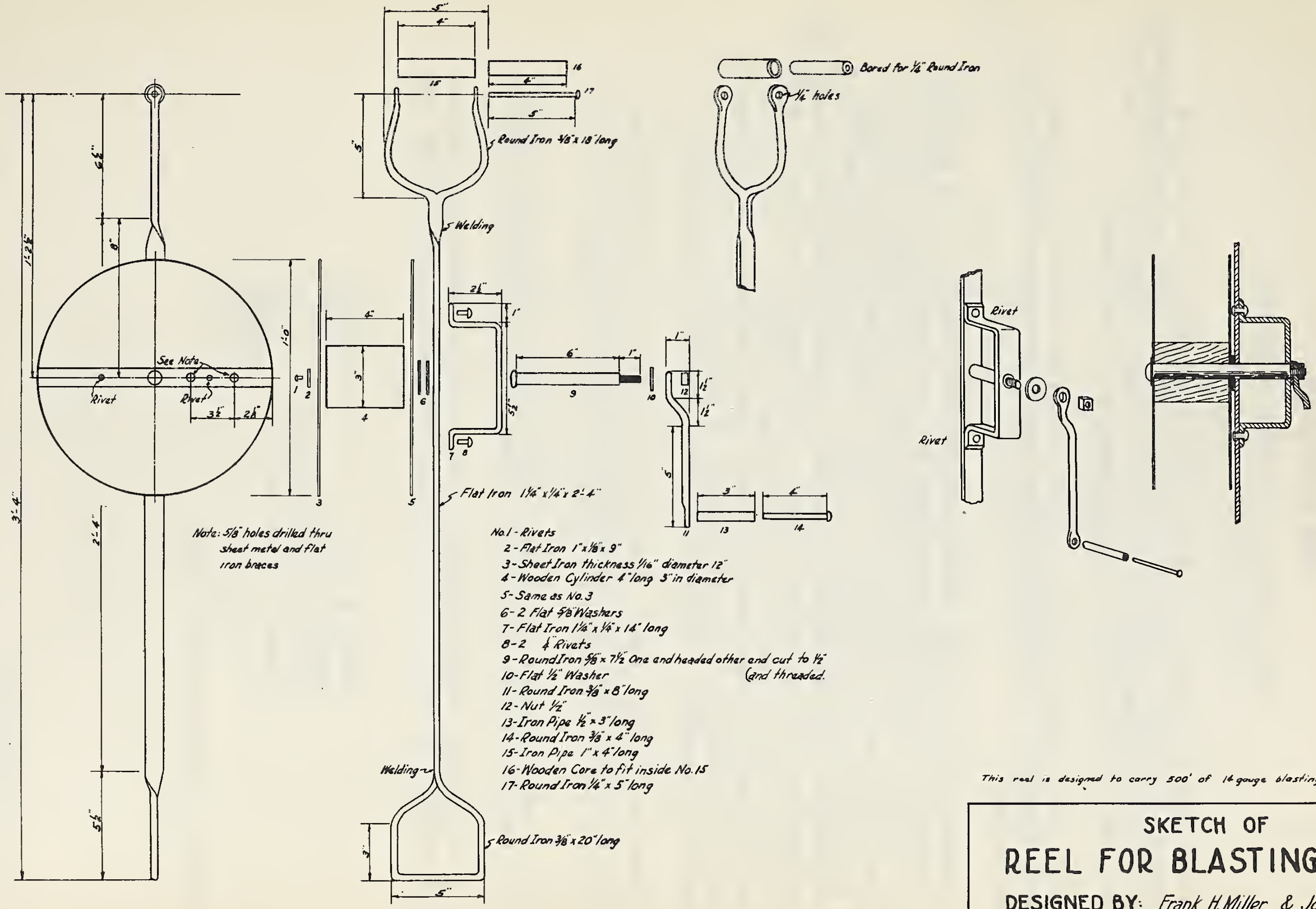
Scale 1" = 12"





Axe Handle Drift

Camp Axin F25
Manistee P.U.
March 1937
Designed by Wm. Vaughan
Drawn by G.A. Choate



Note: 5/8" holes drilled thru sheet metal and flat iron braces

No. 1 - Rivets
2 - Flat Iron 1" x 1/8" x 9"
3 - Sheet Iron thickness 1/16" diameter 12"
4 - Wooden Cylinder 4" long 3" in diameter
5 - Same as No. 3
6 - 2 Flat 5/8" Washers
7 - Flat Iron 1 1/4" x 1/4" x 14" long
8 - 2 1/4" Rivets
9 - Round Iron 5/8" x 7 1/2" One end headed other end cut to 1/2" (and threaded.
10 - Flat 1/2" Washer
11 - Round Iron 3/8" x 8" long
12 - Nut 1/2"
13 - Iron Pipe 1/2" x 3" long
14 - Round Iron 3/8" x 4" long
15 - Iron Pipe 1" x 4" long
16 - Wooden Core to fit inside No. 15
17 - Round Iron 1/4" x 5" long

This reel is designed to carry 500' of 14 gauge blasting wire.

SKETCH OF

REEL FOR BLASTING WIRE

DESIGNED BY: *Frank H. Miller & John Snow*
SKETCH BY: *Frank H. Miller*
DATE: SEPT. 17, 1934
S-60 BARNUM POND PAUL SMITH'S N.Y.

HOME MADE FORGE

Submitted by C. T. Gordon, Foreman
Camp S-52, Wartburg, Tenn.

Most road building camps have, doubtless, found that the army surplus portable forges in such general use in CCC camps are not sufficient to properly handle large items of tractor, grader, compressor and crusher equipment when straightening or welding must be accomplished.

To correct this difficulty, where commercial power is available, Camp S-52, Tennessee ECW, Wartburg, Tennessee, arranged an electric forge as shown on Page 5.

A second-hand 1/2 H.P. motor and fan was located. This was from an Oil-O-Matic oil burning furnace which had become obsolete, and cost $10.00. A three inch pipe was run horizontally through the wall of the forge, then connected by a 4" x 4" x 3" tee to the vertical 4" pipe. On the fire pot end of the 4" pipe a cap of 1/2" iron perforated by drill holes was welded. The purpose of this was to prevent the fire from falling down the pipe, and to permit air to get to the base of the fire. At the bottom of the 4" pipe, a sliding ash grate was arranged. This served to force the air upward when closed and when open permitted cleaning out of ashes from the tuyere. In the horizontal 3" pipe line, a cut-off valve was inserted to regulate the amount of air delivered to the tuyere.

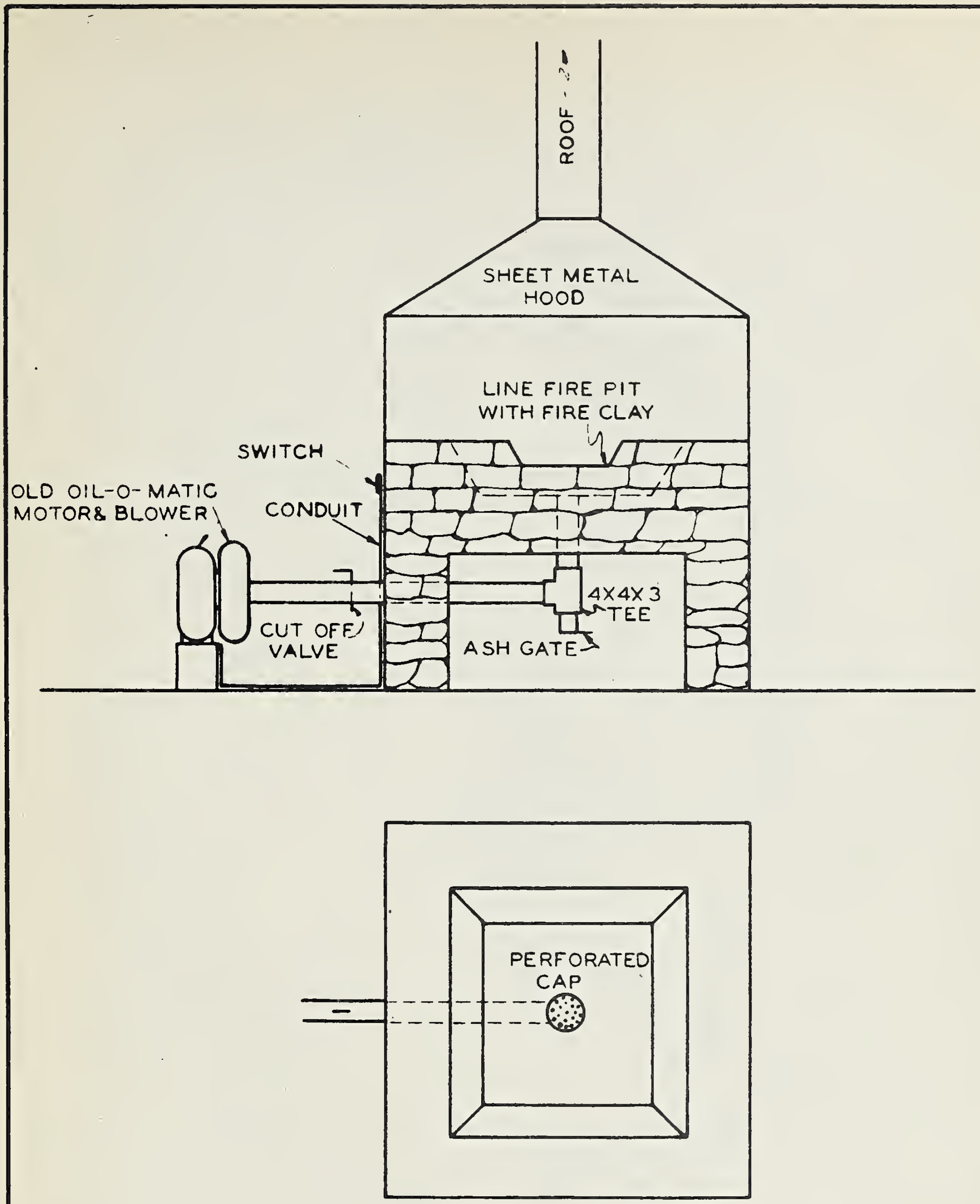
Power was run in under ground by conduit to the motor and the switch was so placed that the blacksmith could easily control the motor operation and the wiring would be completely out of his way.

The forge was built up of native stone and cement mortar with a capping of second hand bricks and the fire-pot lined with fire clay.

An additional pulley and belt hook-up was arranged so that the motor can be used to turn a grind-stone. This is not shown in the diagram.

Motor & fan	$10.00
Pipe & fittings	3.00
Switch, wire & conduit	4.00
Cement & sheet metal	3.00
	$20.00

Sketch shown on opposite page.



SKETCH OF FORGE

CAMP S-52

OPERATED BY SECOND HAND
ELECTRIC MOTOR-BLOWER
TAKEN FROM OLD AUTOMATIC
OIL HEATER

SUGGESTED BY:
C.T. GORDON, FOREMAN